



STATE OF NEW YORK DEPARTMENT OF HEALTH

Flanigan Square, 547 River Street, Troy, New York 12180-2216

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

December 7, 2006

Exemption 7(C)

Property Manager
Amendola Property Management, Inc.
P.O. Box 408
Niagara Falls, New York 14303

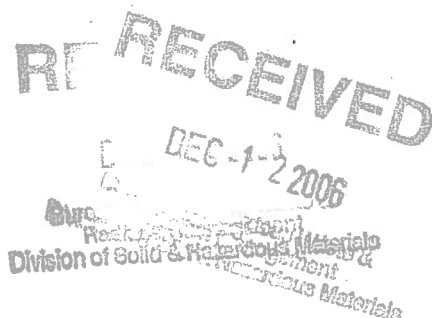
Re: Radiological survey at 9540 Niagara Falls Boulevard

Dear Exemption 7(C),

This is in regard to radiation surveys conducted by representatives of the New York State Department of Health (DOH) and the Niagara County Health Department at 9540 Niagara Falls Blvd on September 15 and 21, 2006. The radiation surveys were conducted as a follow-up to a previous survey conducted at the same location in 1979. In 1979, it was discovered that stone aggregate used to construct the parking lot contained higher than normal concentrations of naturally occurring radioactive materials. At that time the DOH determined that the use of the property as an automobile dealership and the adjacent paved parking lot did not constitute a hazard either to the workers or the public necessitating any immediate remedial action.

The surveys conducted on September 15 and 21, 2006, confirmed that the use of the property remains the same as in 1979. The radiation levels measured inside the building are generally low and do not present an immediate hazard to the workers (see attachment A). One area of the building was not measured in 1979, so we could not compare the results. This area had higher levels than other inside areas. The higher levels measured inside the building correspond to an area that was constructed after the slag was deposited, and we suspect that some slag remains under this part of the building. Although the levels in this area are relatively low, prolonged occupancy of this area could result in radiation doses above the recommended level of 100 milli rems/year for members of the public. The levels would, however be well below the OSHA limit for workers of 5,000 mrem per year (see Attachment C).

Since the current use of this space includes an office, we recommend that this area be used for other purposes such as storage or other uses. This way workers will not be present for prolonged periods, and therefore would not receive a dose above the guidelines for members of



the public. For your information, I have attached our Radiation and Health booklet which provides general information on radiation.

In addition to the radiation surveys, radon measurements were taken inside the building from September 21 to 25, 2006. The results did not show any elevated radon levels. The radon test locations and results are listed on Attachment A. Also long term radiation monitoring devices were placed at locations inside the building and will stay there for approximately 3 months. The devices will be removed on or about December 21, 2006 and sent for processing. We will provide the results to you when they are available.

As indicated in previous correspondence, the concentration of radioactive material in the stone aggregate in its current state does not pose an immediate public health concern, but it is not considered a permanent solution. We are currently working with the New York State Department of Environmental Conservation and the Niagara County Department of Health to assess options for dealing with this material. As part of this assessment we are considering additional surveys of the property, which could include collecting and testing subsurface soil samples of the parking lot. We will contact you in advance if we need to do additional surveys.

If you have any questions or need additional information, please contact me at: 518/402-7550.

Sincerely,



Stephen M. Gavitt, CHP, Director
Bureau of Environmental Radiation Protection

Enclosures:

Attachment A – Survey results

Attachment B - Assessment of potential radiation dose

Attachment C- Examples of radiation exposures, standards and recommendations

“Radiation and Health” booklet

cc: Exemption 7(C), Dunn Tire
J. Devald, Niagara County Health Department
~~B. Youngberg, NYSDEC~~ ✓

ATTACHMENT B

Assessment of potential radiation doses to individuals using Area A (see attachment A).

Area A is a 30' x 30' annex to the main building located at 9540 Niagara Falls Blvd. The property owner indicated that this part of the building was constructed in 1971. It appears that this addition was built over slag which is causing the higher radiation levels inside this part of the building. Also, it does not appear that the slag is uniformly distributed under the concrete floor as the radiation dose rates are localized to discrete spots within this area.

This part of the building contains an office, a storage room, restroom and hallway. The highest radiation level measured was in the storage room and is 115 microR/hour ($\mu\text{R/hr}^1$) above background levels (background is about 15 $\mu\text{R/hr}$). The highest dose rate in the office was 83 $\mu\text{R/hr}$ above background and the average reading for the office is 58 $\mu\text{R/hr}$ above background. The dose rate at the desk was 47 $\mu\text{R/hr}$ above background.

The radiation dose from the buried slag is determined by the location in the room and the amount of time spent at that location. Based on the calculations below only individuals who spend considerable time, each work day, in Area A could receive a radiation dose approaching the recommended limit of 100 mrem per year to members of the public. Drivers or individuals who work in other areas of the building and who may spend only a few hours per day in Area A would not receive a radiation dose in excess of the public dose limits. Based on the current set up if someone spends 40 hours per week, 50 weeks per year at the desk in the office, their annual dose from the slag would be 94 millirem. This is just below the recommended limit of 100 millirems. Because the levels are not uniform throughout the office area and the calculated annual dose is close to the annual dose limit, we recommend that you not use this area (Area A) for an office.

Potential Radiation dose:

Worst case: someone spends 40hrs/week, 50 weeks per year, without moving at the highest location² (currently in storage room) –

$$(40\text{hrs/week}) \times (50 \text{ weeks/yr}) \times (115 \mu\text{R/hr}) = 230 \text{ mrem/yr}$$

Current Office Setup: assumes someone spends 40hrs/week, 50 weeks per year, without moving, at the desk in the office area –

$$(40\text{hrs/week}) \times (50 \text{ weeks/yr}) \times (47\mu\text{R/hr}) = 94 \text{ millirem/yr}$$

¹ 1 $\mu\text{R/hr}$ = 0.001 mR/hr

² This is a very conservative assumption as it assumes that someone stays at this one location, without moving, for the workweek for the entire year. Any movement away from this one location would result in a lower dose.

ATTACHMENT C

Examples of radiation exposures, standards and recommendations

Limit, Recommendation or Exposure	Annual Dose (mrem)
Radiation worker limit (OSHA/NRC)	5,000
Radon daughter limit for uranium miners	4,000
Indoor radon level for which action is recommended by EPA(United States Environmental Protection Agency) (4 pCi/L)	1,000
Lowest radon level for which EPA(United States Environmental Protection Agency) recommends that homeowners consider remedial action (2pCi/L)	500
NCRP(National Council on Radiation Protection and Measurements) remedial action threshold (including background)	500
NCRP(National Council on Radiation Protection and Measurements) recommended limit for infrequent exposure of the public from facilities that emit radiation or radioactivity	500
Average radiation dose to U.S. citizen from all sources	360
Average radon exposure (0.8 pCi/L)	200
Gamma radiation limit for buildings contaminated with uranium mill tailings (above background)	175
Typical dose to civilian air crews	160
NCRP(National Council on Radiation Protection and Measurements) recommended limit for continuous or frequent exposure of the public from facilities that emit radiation or radioactivity	100
U.S. average natural background except radon	100
U.S. average for diagnostic radiological medical procedures	53
One transcontinental round trip per year by air	5

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